Montana Clinical Communication & Surveillance Report

MONTANA
CARDIOVASCULAR HEALTH AND DIABETES PROGRAMS

Montana Department of Public Health and Human Services
Chronic Disease Prevention and Health Promotion Program
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COMMUNITY AWARENESS OF HEART ATTACK AND STROKE IN MONTANA, 2004 – 2005

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BACKGROUND

Cardiovascular disease is the leading cause of death in Montana. In 2003, 23% of deaths were attributed to heart disease statewide and 7% to stroke. Public health efforts to reduce cardiovascular disease have focused on heart attack risk; however, stroke has gained a new emphasis recently. Public awareness campaigns to encourage rapid recognition and treatment of heart attack symptoms have been conducted for many years.[1] Because many women were not aware of their risk for heart attack, recent efforts have focused on increasing awareness and symptom recognition among women.[2] Public awareness campaigns also emphasized reducing the risk of heart disease by controlling blood pressure and cholesterol. Rapid recognition and treatment can also lead to improved patient outcomes for those with ischemic stroke.[3] Efforts to make the public aware of the necessity to recognize and seek prompt treatment for stroke began in early 2000 after clinical trials showed the efficacy of thrombolytic therapy instituted within 3 hours of symptom onset.[4] Reducing risk factors for stroke is also an important public health message.

To increase awareness of stroke and heart attack signs and symptoms, the Montana Cardiovascular Health Program conducted public education

awareness campaigns in several communities around the state. In conjunction with the campaigns, telephone surveys were conducted, in 2004, in several communities to assess knowledge about stroke risk factors, signs and symptoms of acute stroke and the need to use 911. Similar surveys were also conducted in 2005 in other communities to assess public awareness and knowledge of heart attack signs and symptoms. This report compares community knowledge and awareness about stroke to similar knowledge and perceptions about heart attack.

METHODS

During two time-periods, February-April 2004 and March-April 2005, the Montana Department of Public Health and Human Services conducted baseline community knowledge telephone surveys among adults aged 45 years and older in four Montana counties. The 2004 telephone surveys were conducted in two counties to assess knowledge of stroke warning signs, risk factors and the need to call 911 (N = 800). The 2005 telephone surveys were conducted in two different counties to assess heart attack signs and symptoms knowledge and the need to call 911 (N = 801).

Both the stroke and heart attack surveys included questions about signs and symptoms knowledge, use of 911 Emergency Medical Services (EMS), awareness about risk of either heart attack or stroke, advice from healthcare professionals regarding risk of heart attack/stroke and demographic information.

STROKE

Respondents were prompted to name up to three warning signs for stroke. Respondents were asked what they would do first if they thought someone was having a stroke. Aided responses included: take them to the hospital; tell them to call their doctor; call 911; call their spouse or family member; do something else; don't know/not sure; and refused. Respondents were also asked if they believed they were at an increased risk of having a stroke and if they had ever received counseling from a physician or another health professional regarding their risk for developing a stroke.

The following symptoms were considered established warning signs for stroke: dizziness; difficulty understanding or slurred speech; numbness or weakness on one or both side(s) of body or face; problems with vision; severe headache; trouble walking; loss of balance or lack of coordination.

HEART ATTACK

Respondents to the heart attack survey were prompted to name up to five warning signs for heart attack. Respondents were also asked what they would do first if they thought someone was having a heart attack. Responses to this question included: administer CPR; advise them or drive them to the hospital; advise them to call their spouse, other family member, their doctor or clinic; advise them to lie down; advise them to take aspirin or other medicine; call 911 or ambulance; other; don't know/not sure; and refused. Similar to the stroke survey, heart attack respondents were asked if they believed they were at an increased risk of having a heart attack and if they ever received counseling from a physician or another health professional regarding their risk for heart attack.

The following symptoms were considered warning signs for heart attack: arm or shoulder pain; back pain; chest pain; chest pressure; chest tightness; chest discomfort (heaviness, burning tenderness); dizziness; lightheadedness; jaw pain;

nausea/vomiting; neck pain; shortness of breath or difficulty breathing; sweating; weakness; fatigue; or faintness.

Data analysis was completed using SPSS v13.0 software (SPSS Inc., Chicago, IL). The chi-square test was used to compare differences in respondents' knowledge of three or more warning signs, use of 911 EMS, heart attack or stroke risk and receiving advice from a healthcare professional regarding heart attack or stroke risk, by type of survey and by sex.

RESULTS

Among stroke survey respondents (N = 800), the mean age was 61 years (range 45 to 95) with 36% being 65 years and older. In addition, 60% were female, 96% were white and 93% reported 12 or more years of education. Among heart attack survey respondents (N = 801), the mean age was 62 years (range 45 to 97) with 40% being 65 years and older, 61% were female, 98% were white and over 90% reported 12 or more years of education.

Figure 1. Knowledge of established signs and symptoms of heart attack and stroke, Montana, 2004 and 2005.

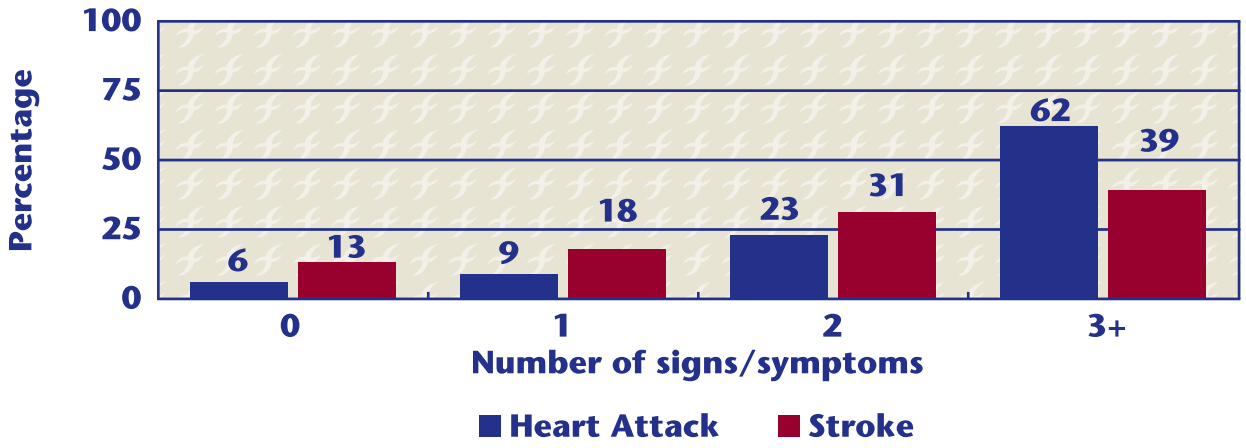


Table 1. Knowledge of established signs and symptoms of heart attack and stroke, Montana, 2004 and 2005.

	Heart Attack* N = 801		Stroke** N = 800	
Number of signs/symptoms	% (n)	% (n)	% (n)	% (n)
	Men	Women	Men	Women
None	7 (21)	5 (24)	15 (50)	11 (53)
One or more	93 (290)	95 (466)	85 (272)	89 (425)
Two or more	82 (254)	88 (429)†	62 (200)	75 (357)†
Three or more	56 (173)	66 (323)†	35 (111)	42 (200)†

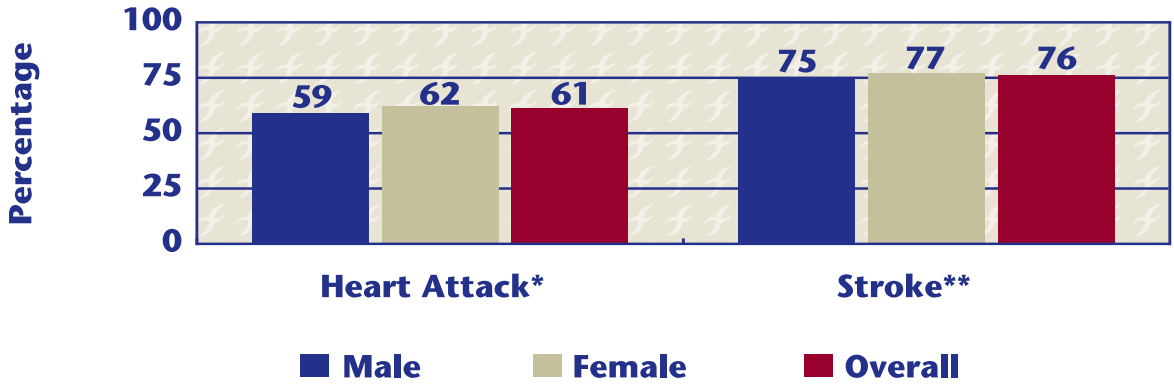
*Surveyed Silver Bow and Flathead counties in Spring 2005
**Surveyed Cascade and Yellowstone counties in Spring 2004
†P ≤0.05 for men vs. women comparison

Heart attack respondents (62%) were more likely than stroke respondents (39%) to correctly identify three or more established warning signs. (Figure 1) Among stroke survey respondents, women were more likely to correctly identify three or more established warning signs of stroke compared to men (42% vs. 35%). Similarly, women respondents in the heart attack survey were more likely to correctly identify three or more established warning signs of heart attack compared to men (66% vs. 56%). (Table 1)

Overall, stroke respondents (76%) were more likely to indicate they would call 911 EMS first if they witnessed someone having a stroke compared to heart attack respondents (61%) who witnessed someone having a heart attack. (Figure 2) Among respondents to both the heart attack and stroke surveys, there was no significant difference by sex in the proportion of respondents who indicated they would first call 911 EMS if they witnessed someone having a heart attack or stroke. (Figure 2) Interestingly, 21% of heart attack respondents reported the first thing they would do if they witnessed someone having a heart attack was advise them to take an aspirin or other medication (data not shown).

Overall, significantly more respondents to the heart attack survey (50%) believed they were at risk of having a heart attack compared to only 39% of respondents to the stroke survey who

Figure 2. First reaction to witnessing a potential heart attack or stroke is to call 911 EMS, Montana, 2004 and 2005.



*Data from Silver Bow and Flathead counties, Spring 2005
**Data from Cascade and Yellowstone counties, Spring 2004

Table 2. Awareness of risk and advice from healthcare professionals regarding heart attack/stroke risk, Montana, 2004 and 2005.

	Heart Attack* N = 801	Stroke** N = 800
	% (n)	% (n)
At risk for having a heart attack/stroke	50 (389)†	39 (309)
Advice from a healthcare professional regarding heart attack/stroke risk	27 (212)†	14 (112)

*Data from Silver Bow and Flathead counties, Spring 2005
**Data from Cascade and Yellowstone counties, Spring 2004
†P ≤0.05 for heart attack vs. stroke comparison

believed they were at risk of having a stroke. (Table 2) Only 27% of heart attack respondents recalled ever receiving counseling from a healthcare professional regarding their risk for heart attack. (Table 2) This proportion was significantly greater than the proportion of stroke respondents (14%) who recalled ever receiving advice from a healthcare professional regarding their risk for stroke.

DISCUSSION

The majority of Montana respondents in both stroke and heart attack community telephone surveys were aware of the warning signs for stroke and heart attack. Women were more likely to know the signs and symptoms for both heart attack and stroke compared to men. And, over 75% of stroke and over 60% of heart attack respondents reported that they would first call 911 if they thought someone was having a stroke or heart attack, respectively. Although almost half the adults considered themselves at risk for heart attack or stroke, fewer could recall specific counseling from health care professionals about the risk. The findings from the surveys provide an opportunity for Montana health care professionals to discuss several important issues with individual patients. One important topic would include what to do in specific communities in response to acute symptoms of a possible heart attack or stroke. In addition, specific individual counseling for cardiovascular risk reduction strategies can enlist active patient participation in reducing the risk for both heart attack and stroke.

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5TH ANNUAL CARDIOVASCULAR HEALTH SUMMIT CONFERENCE – GROUSE MOUNTAIN LODGE, WHITEFISH, MONTANA, APRIL 7, 2006 SAVE THE DATE!

The Montana Cardiovascular Health Program's Annual Summit Conference will be held on Friday, April 7, 2006 in Whitefish, Montana at Grouse Mountain Lodge. This year's conference will identify methods to promote cardiovascular health and treat cardiovascular disease. Educational credits will be offered. For more information contact Crystelle Fogle at (406) 947-2344 or e-mail cfogle@mt.gov.

DIABETES PROFESSIONAL CONFERENCE – GROUSE MOUNTAIN LODGE, WHITEFISH, MONTANA, OCTOBER 19-20, 2006 SAVE THE DATE!

The Montana Diabetes Project's professional conference will be held on Thursday and Friday, October 19-20, 2006 in Whitefish, Montana at Grouse Mountain Lodge. This year's conference titled "Diabetes Care and Prevention: Working Together Under the Big Sky, 2006" will feature Dr. Aaron Vinik as the keynote speaker. For more information contact Susan Day at (406) 444-6677 or e-mail sday@mt.gov.

WHAT ARE THE MONTANA DIABETES PREVENTION AND CARDIOVASCULAR HEALTH PROGRAMS AND HOW CAN WE BE CONTACTED?

The Montana Diabetes Control and Cardiovascular Health Programs are funded through cooperative agreements with the Centers for Disease Control and Prevention, Division of Diabetes Translation (U32/CCU822743-03), the Division of Adult and Community Health (U50/CCU821287-04) and through the Montana Department of Public Health and Human Services.

The mission of the Diabetes Control and Cardiovascular Health Programs is to reduce the burden of diabetes and cardiovascular disease among Montanans. Our web pages can be accessed at http://ahec.msu.montana.edu/diabetes/default.htm and http://montanacardiovascular.state.mt.us.

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